

Figure-1: Types of Ice Deposits

(REF: Transmission Line Reference Book, EPRI, 1979)

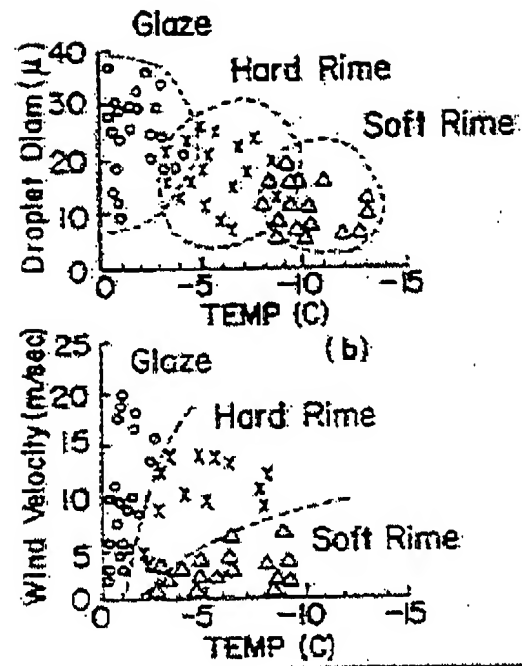


Figure-2: Meteorological Conditions for the 3 Types of Ice Deposits

(REF: Transmission Line Reference Book, EPRI, 1979)

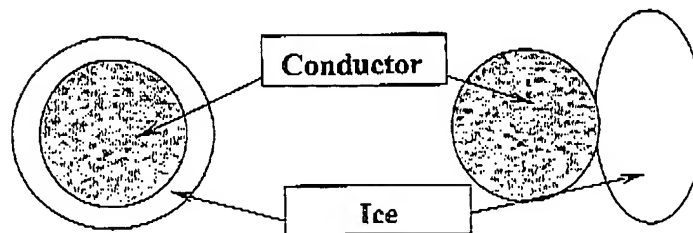


Figure-3: A Schematic of Ice Buildup on a Power Line

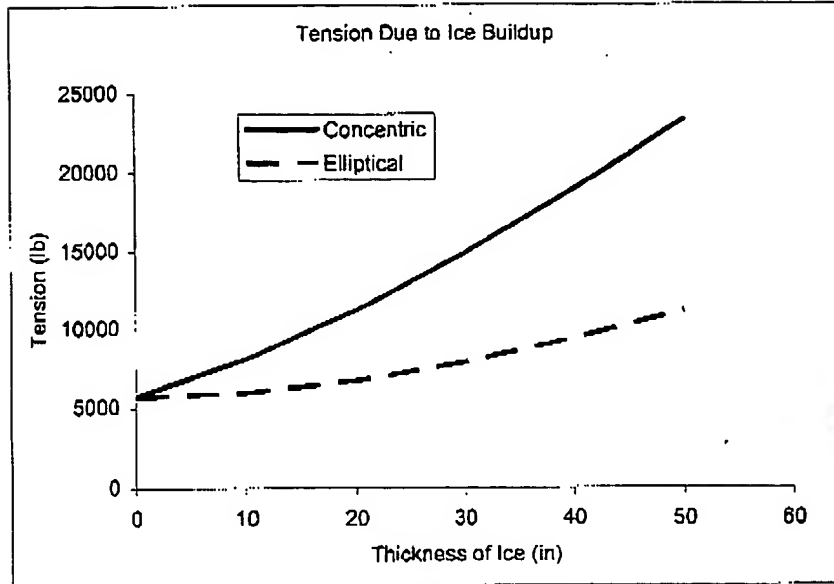


Figure-4: Line Tension as a function of ice buildup

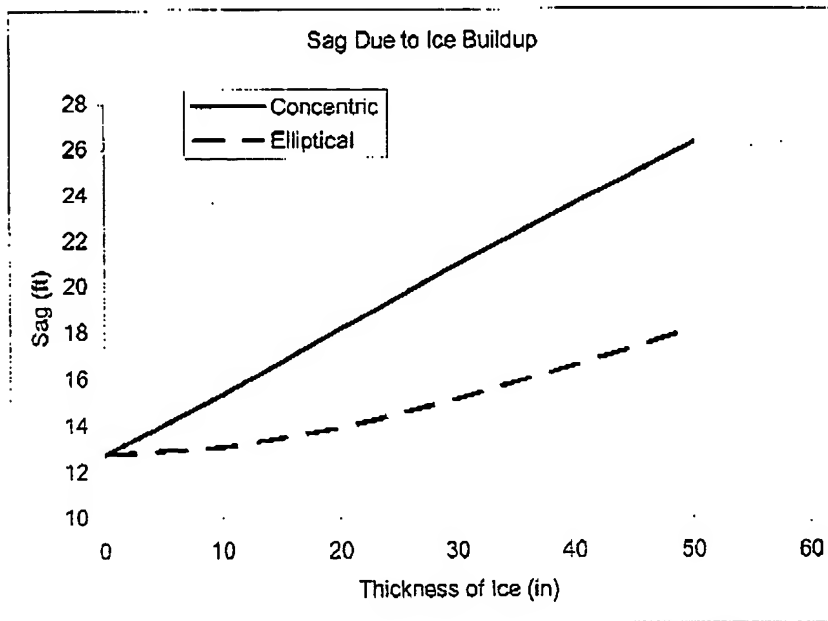


Figure-5: Line Sag as a function of ice buildup

(Unit Conversion: 1 in = 25.4 mm; 1 lb. = 4.45 N)

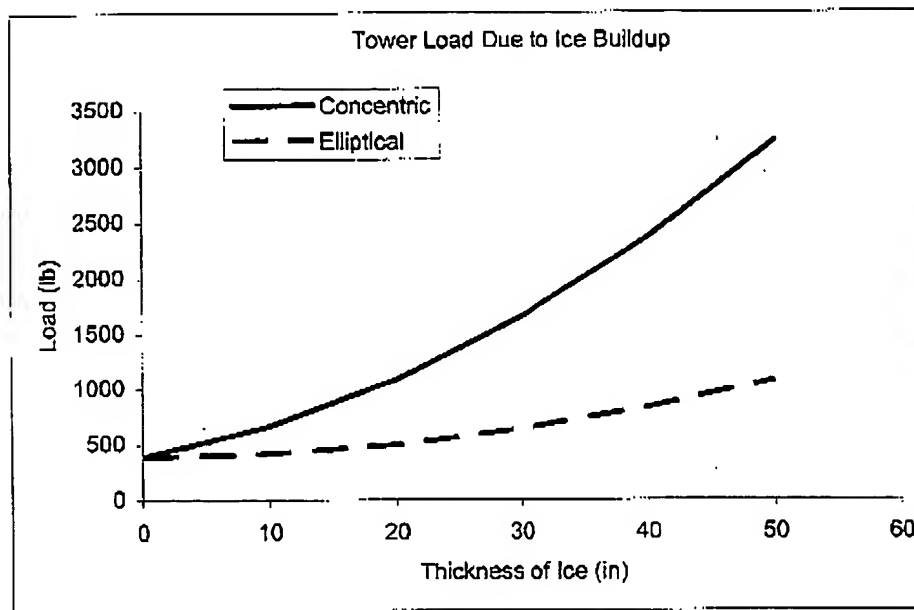


Figure-6: Tower Load as a function of ice buildup

(Unit Conversion: 1 in = 25.4 mm; 1 lb. = 4.45 N)

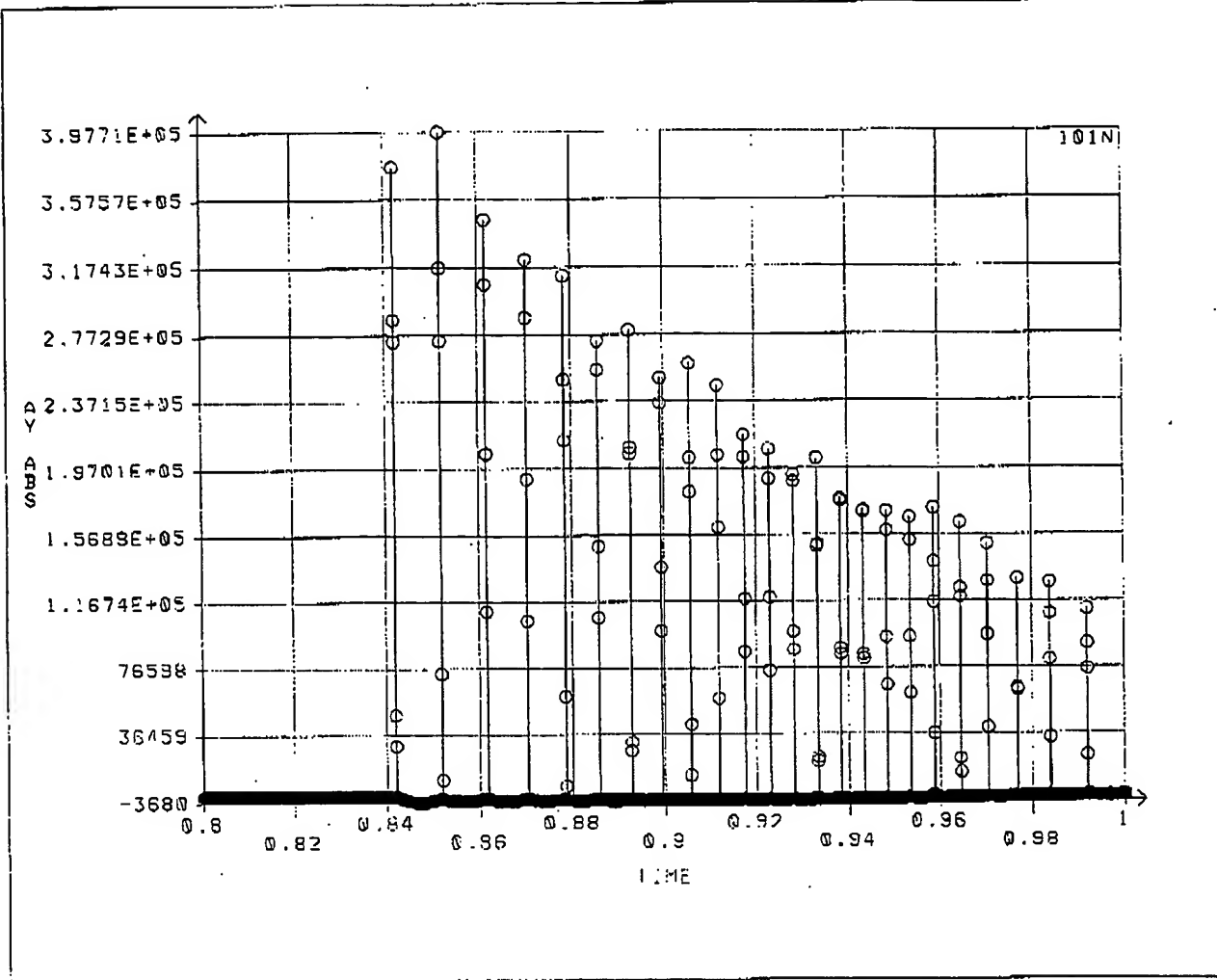
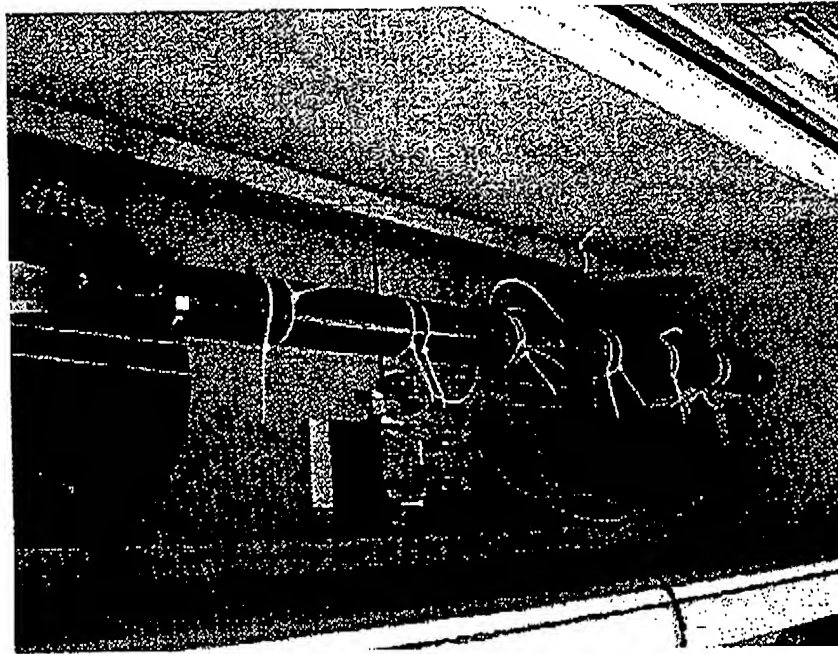
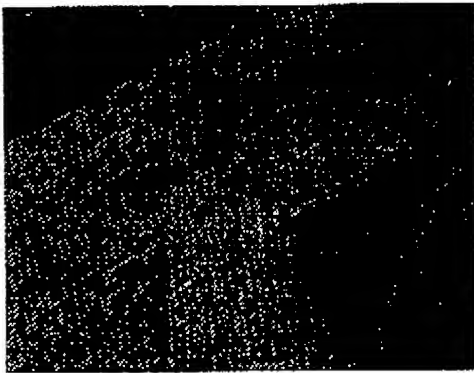


Figure-7: Line deceleration (in/sec² vs. time) after impact

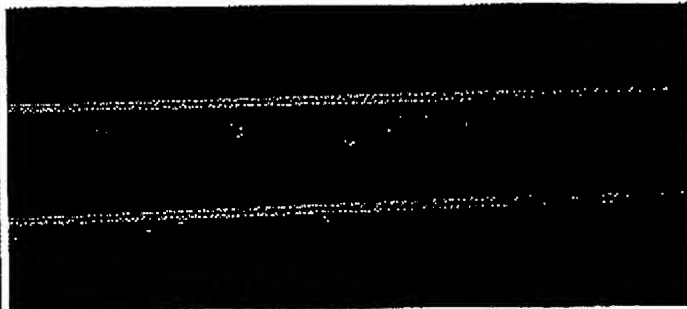
(Unit Conversion: 1 in = 25.4 mm; 1 lb. = 4.45 N)



8(a): Freezer Test Assembly



8(b): Uniform ice formation



8(c): Deicer impact on ice formation

Figure-8: Line De-Icing Freezer Test

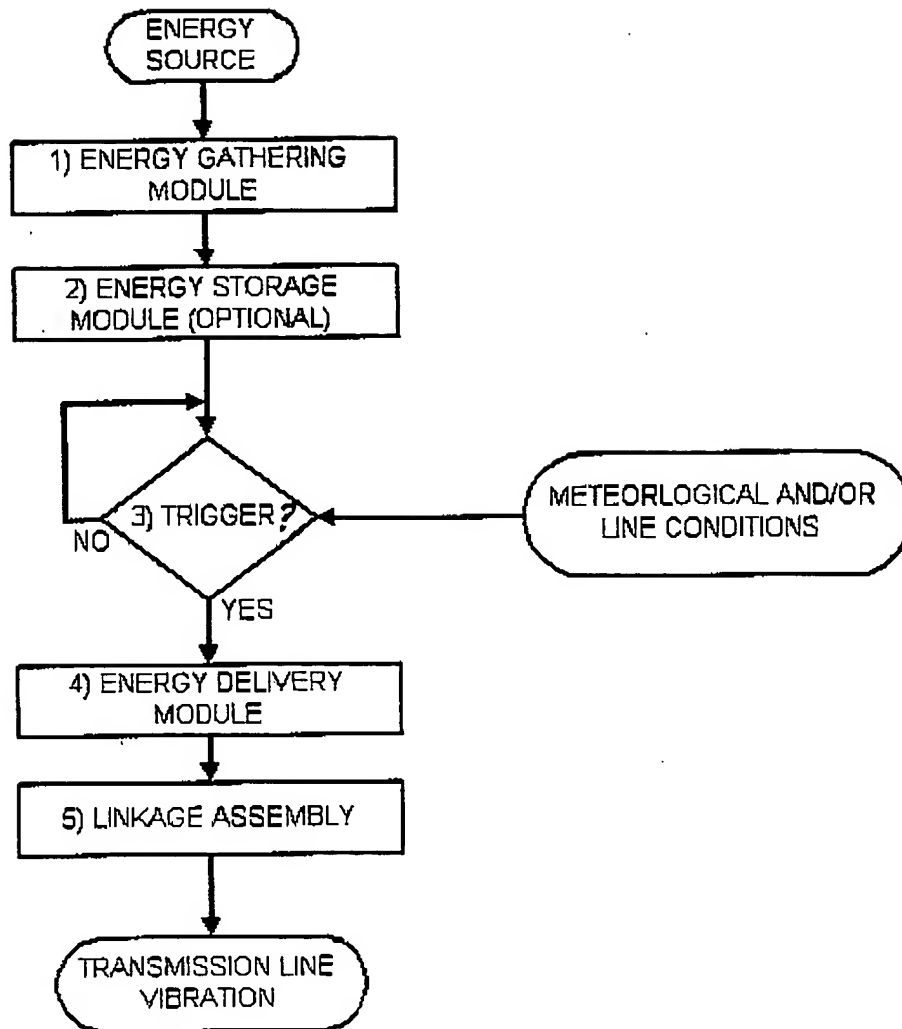


Figure-9: General Block Diagram of the De-Icer Device

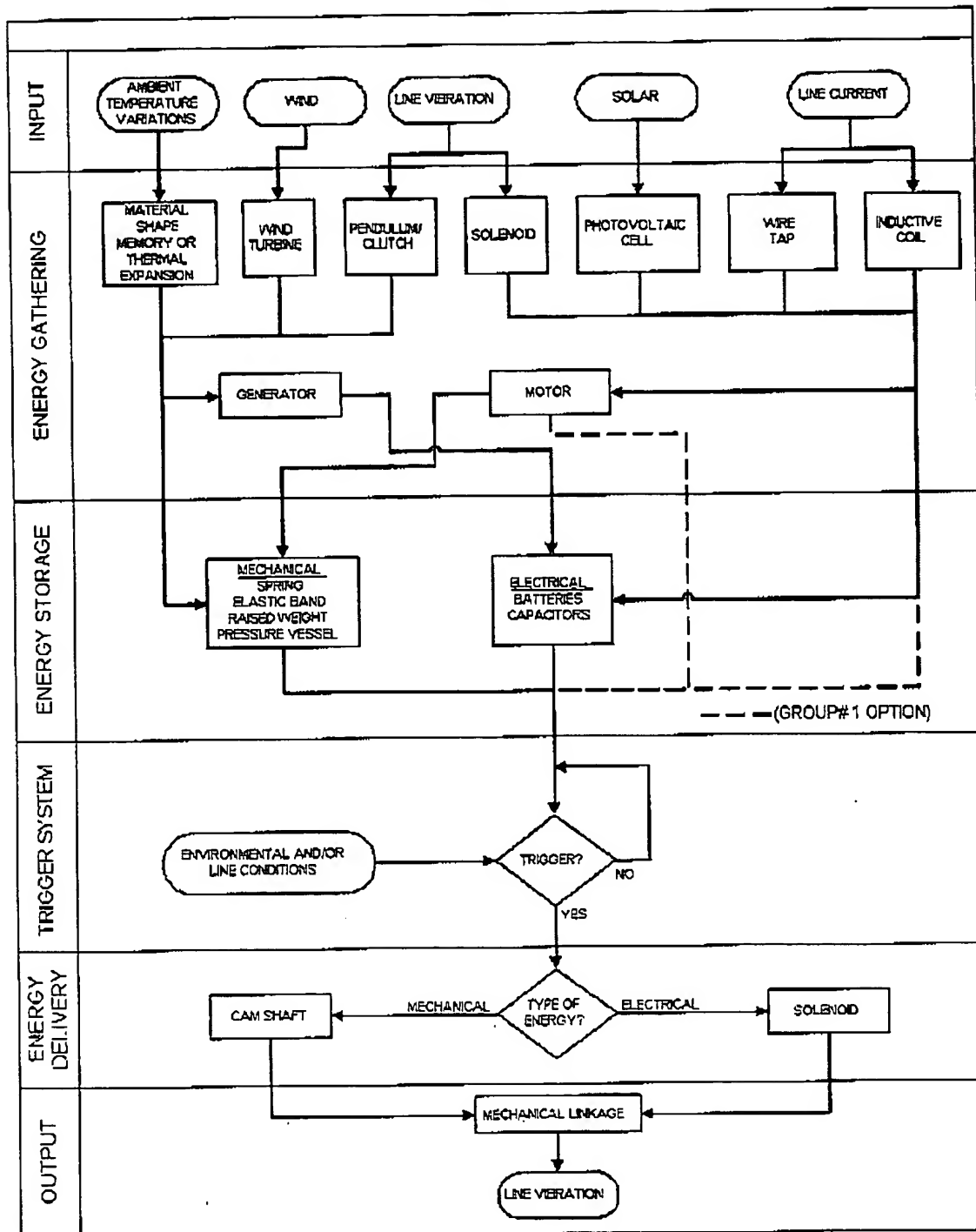


Figure-10: Detailed Block Diagram of the De-Icer Device

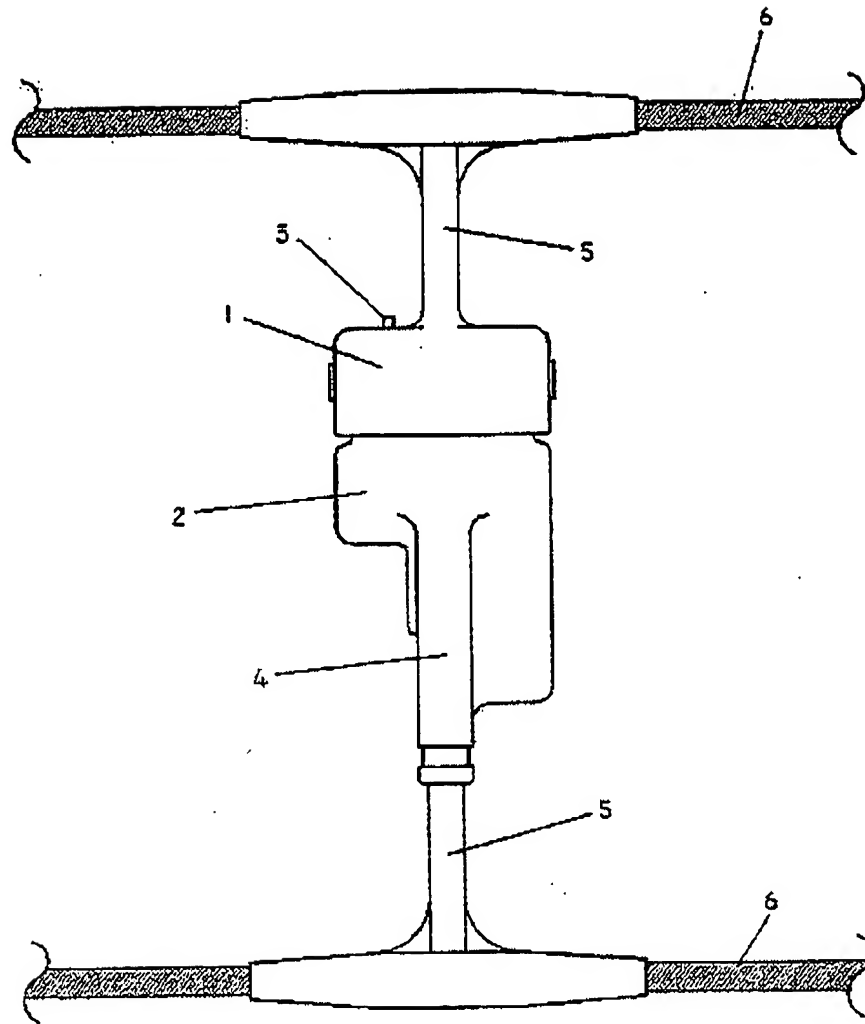


Figure-11: General Schematic of the De-Icer Device

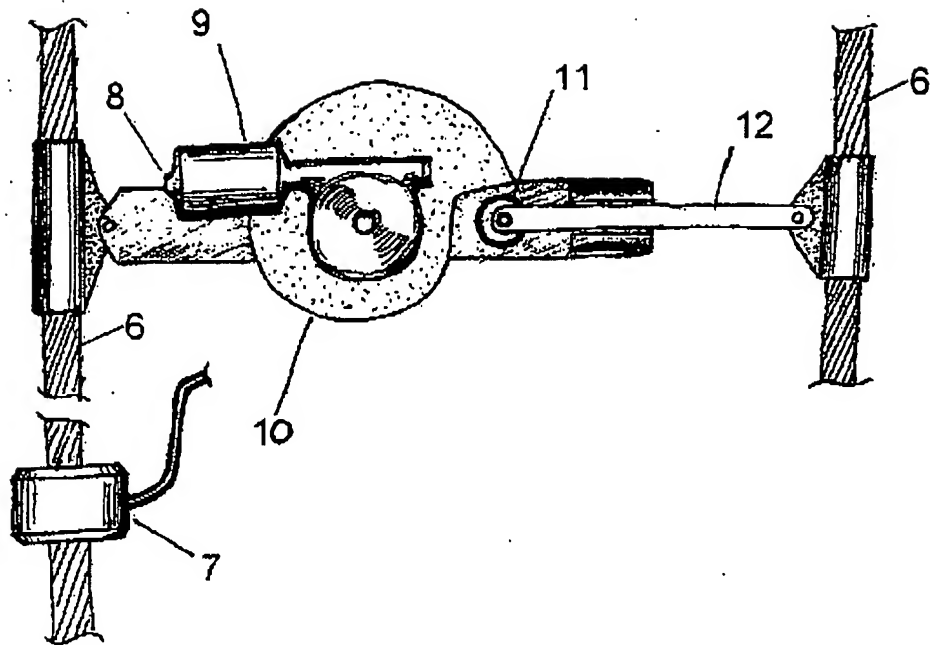


Figure-12: A Group #1 Embodiment of the De-Icer Device

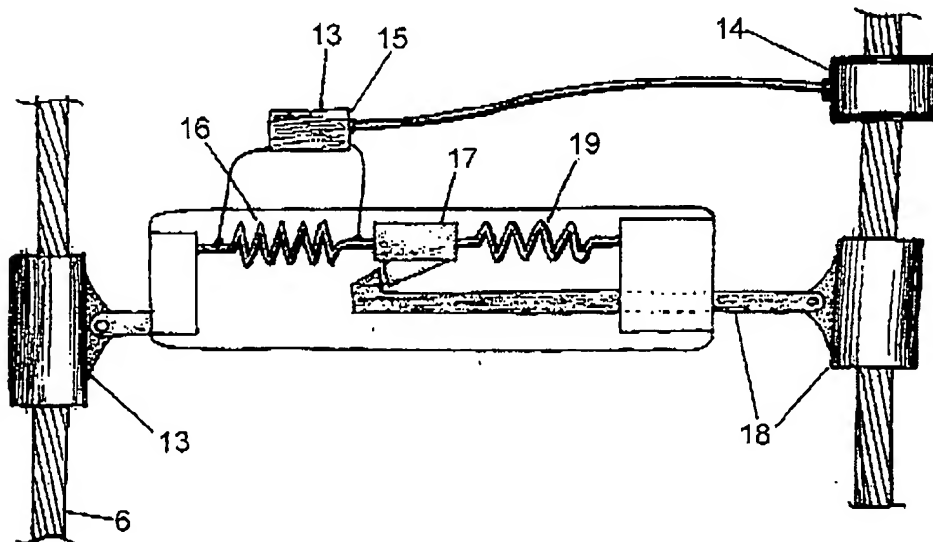


Figure-13: A Group #1 Embodiment of the De-Icer Device

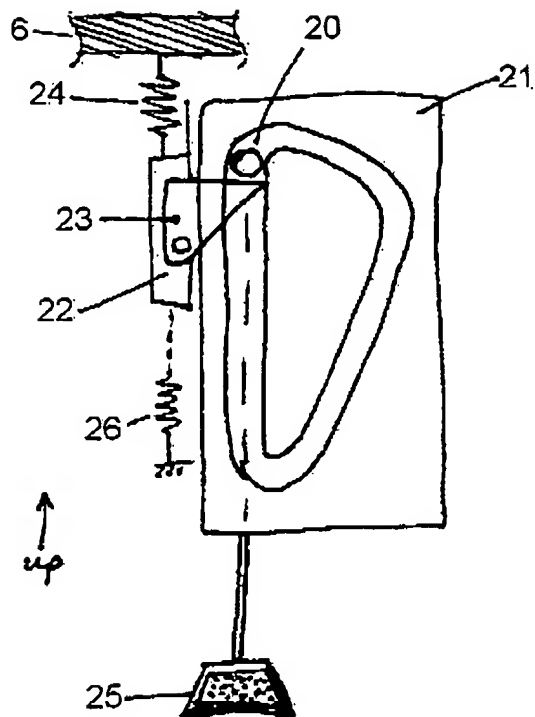


Figure-14: A Group #1 Embodiment of the De-Icer Device

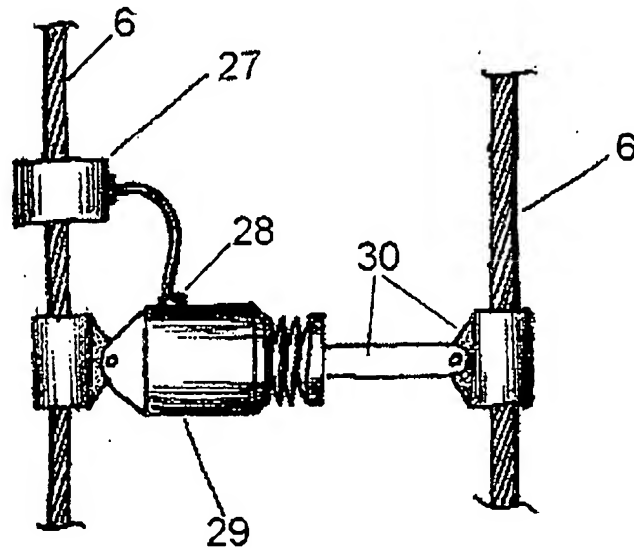


Figure-15: A Group #1 Embodiment of the De-Icer Device

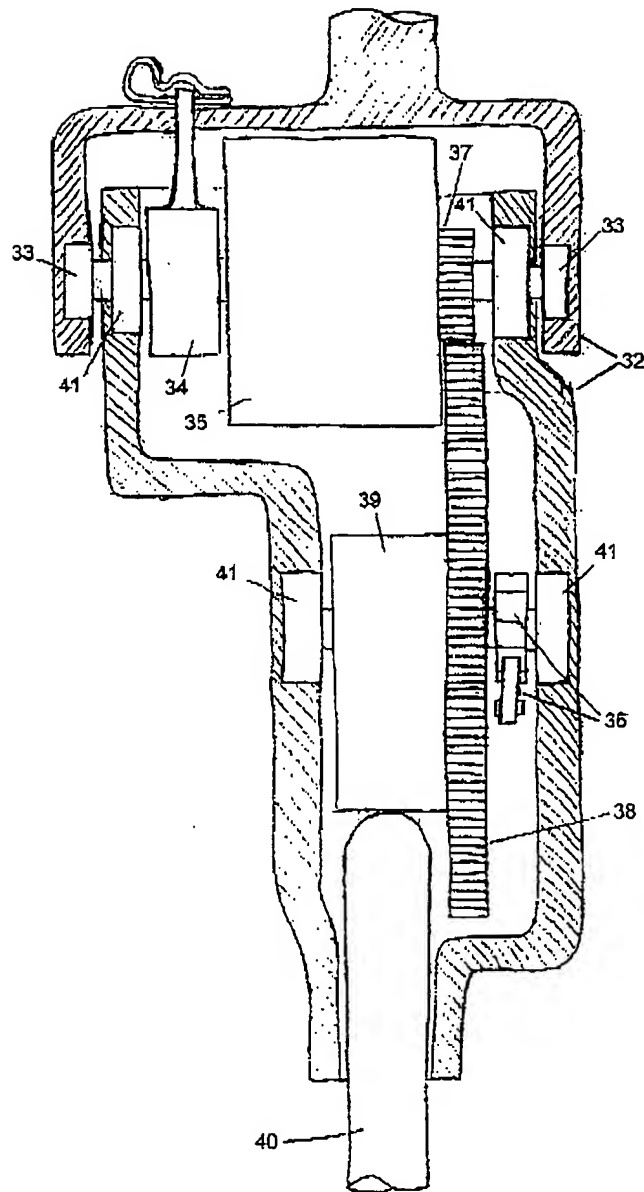


Figure-16: A Group #2 Embodiment of the De-Icer Device

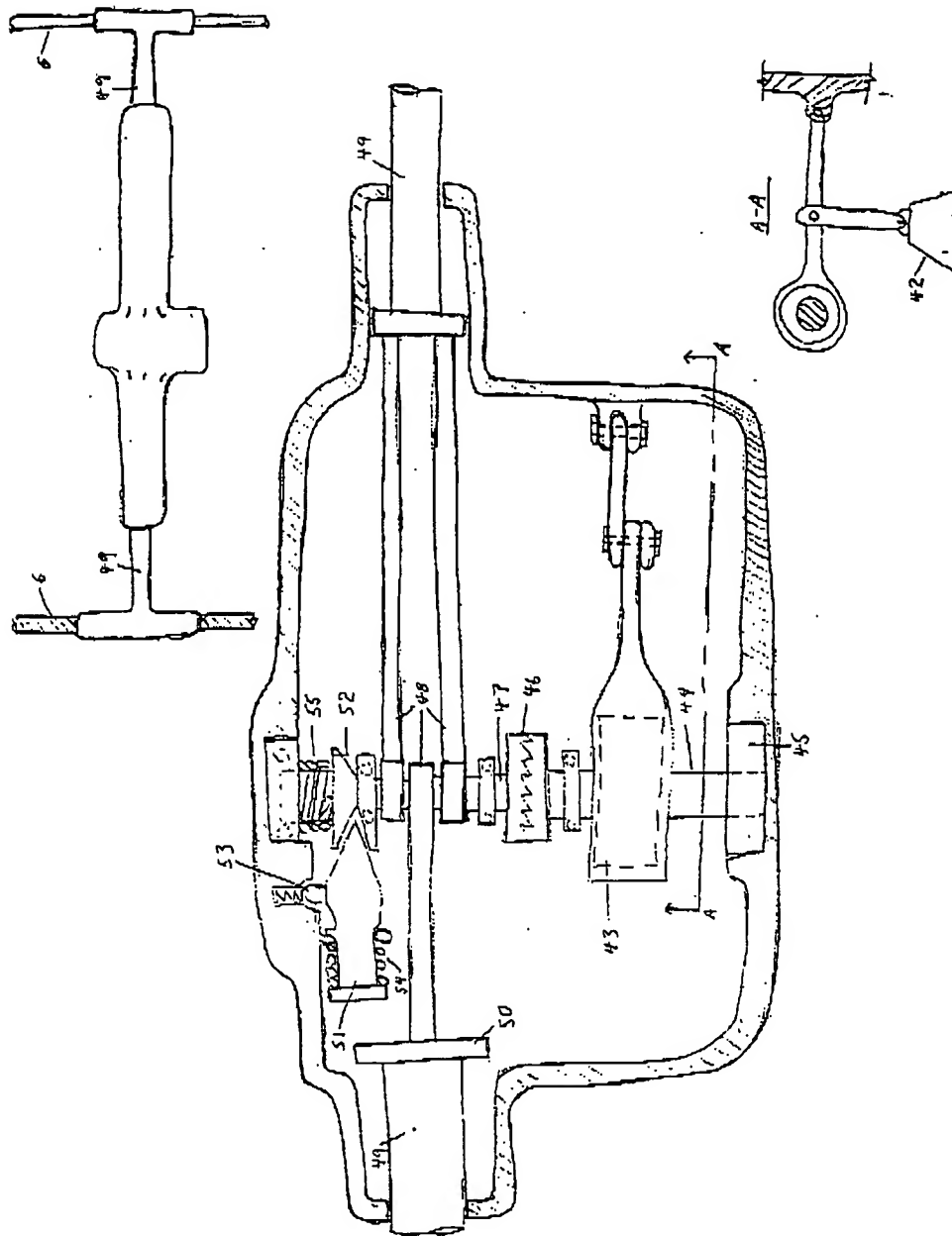


Figure-17: A Group #2 Embodiment of the De-Icer Device